



DE 14-083

Knollwood Energy of MA LLC
P.O. Box 30
Chester, New Jersey 07930

March 19, 2014

NHPUC 24MAR'14PM2:13

Debra A. Howland
Executive Director
New Hampshire Public Utilities Commission
21 South Fruit Street, Suite 10
Concord, NH 03301-2429

Dear Ms Howland,

Enclosed please find an application for Warren Goldblatt to be part of the Knollwood Energy of MA LLC (NH-II-13-089) Class II Photovoltaic aggregation for New Hampshire Renewable Energy Certificates (RECs) generated from customer-sited sources, pursuant to New Hampshire Code of Administrative Rules Puc 2506.

Customer Information

Warren Goldblatt
9 Hartswood Rd.
Dover, NH 03820
603-498-8410
goldblattw@comcast.net

The Nepool GIS ID # for this facility is: NON39448. Also enclosed are the Simplified Process Interconnection Application and Service Agreement and Certificate of Completion for Simplified Process Interconnections. An electronic version has been sent to executive.director@puc.nh.gov.

Please do not hesitate to contact me if you have any questions regarding this application.

Thank you for your consideration,

Alane Lakritz

Alane Lakritz
President
Knollwood Energy of MA LLC
862-432-0259
908-955-0593 (fax)
Alane@KnollwoodEnergy.com

Enclosures (3)



State of New Hampshire Public Utilities Commission

21 S. Fruit Street, Suite 10, Concord, NH 03301-2429



DRAFT APPLICATION FORM FOR RENEWABLE ENERGY CERTIFICATE (REC) ELIGIBILITY FOR CLASS I AND CLASS II SOURCES WITH A CAPACITY OF 100 KILOWATTS OR LESS

Pursuant to New Hampshire Administrative Code [Puc 2500](#) Rules including Puc 2505.08, Certification of Certain Customer-Sited Sources

- Please submit one (1) original and two (2) paper copies of the completed application and cover letter* to:
Debra A. Howland, Executive Director, New Hampshire Public Utilities Commission
21 South Fruit Street, Suite 10, Concord, NH 03301-2429
- Send an electronic version of the completed application and the cover letter electronically to
executive.director@puc.nh.gov.
- The cover letter must include complete contact information and identify the renewable energy class for which the applicant seeks eligibility. Pursuant to Puc 2505.01, the Commission is required to render a decision on an application within 45 days of receiving a completed application.

If you have any questions please contact Barbara Bernstein at (603) 271-6011 or Barbara.Bernstein@puc.nh.gov.

- Photovoltaic (PV) solar facilities are Class II resources. Contact Barbara.Bernstein@puc.nh.gov for assistance.

Eligibility Requested for: Class I ☐ Class II ☒ Check here ☐ if this facility part of an aggregation.

If the facility is part of an aggregation, please list the aggregator's name. Knollwood Energy of MA

- Provide the following information for the owner of the PV system.

Applicant Name Warren Goldblatt Email goldblattw@comcast.net

Address 9 Hartwood Road City Dover State NH Zip 03820

Telephone 603-498-8410 Cell _____

- For business applicants, provide the facility name and contact information (if different than applicant contact information).

Facility Name _____ Primary Contact _____

Address _____ City _____ State _____ Zip _____

Telephone _____ Cell _____

Email address: _____

- Provide a complete list of the equipment used at the facility, including the revenue grade REC meter, and, if applicable, the inverter. Your facility will not qualify for RECs without a REC meter.

equipment	quantity	Type	equipment	quantity	Type
PV panels	54	Suniva Optimus 260-60-4-100	other		
Inverter	3	SMA (1) SunnyBoy 7000 US TL, (2) SunnyBoy 3000 US TL	other		
meter	1	Schlumberger-11157428	other		

- A copy of the interconnection agreement and the approval to operate your PV system from your electric utility must be included with your application.
- For PSNH customers, both the *Simplified Process Interconnection Application* and *Exhibit B - Certificate of Completion* are required.

What is the nameplate capacity of your facility (found on your interconnection agreement)? 14.04

What was the initial date of operation (the date your utility approved the facility)? 10/03/13

- Provide the name, license number and contact information of the installer, or indicate that the equipment was installed directly by the customer.

Installer
Name ReVision Energy Contact Heather Fournier License # (if applicable) 13139M
Address 7 Commercial Drive City Exeter State: N Zip 03833
Telephone 603-679-1777 email heather@revisionenergy.com

If the equipment was installed directly by the customer, please check here: ☐

- Provide the name and contact information of the equipment vendor.

☐ X Check here if the installer provided the equipment and proceed to the next question.

Business Name _____ Contact _____
Address _____ City _____ State _____ Zip _____
Telephone _____ email _____

- If an independent electrician was used, please provide the following information.

Electrician's Name _____ License # _____
Business Name _____ Email _____
Address _____ City _____ State _____ Zip _____

- **Provide the name of the independent monitor for this facility.** (A [list](http://www.puc.nh.gov/Sustainable%20Energy/Renewable_Energy_Source_Eligibility.htm) of approved independent monitors is available at http://www.puc.nh.gov/Sustainable%20Energy/Renewable_Energy_Source_Eligibility.htm.)

Independent Monitor's Name Paul Button, Energy Audits Unlimited

Is the facility certified under another state's renewable portfolio standard? yes ☐ no ☒
 If "yes", then provide proof of the certification as **Attachment C**.

- **Please note, if your facility is part of an aggregation, your aggregator should provide you with the following information.**
- **In order to qualify your facility's electrical production for Renewable Energy Certificates (RECs), you must register with the NEPOOL – GIS. Contact information for the GIS administrator follows:**

James Webb
Registry Administrator, APX Environmental Markets
224 Airport Parkway, Suite 600, San Jose, CA 95110
Office: 408.517.2174 jwebb@apx.com

If you are not part of an aggregation, Mr. Webb will assist you in obtaining a GIS facility code.

GIS Facility Code # NON39448 Asset ID # NON39448

- **Complete an affidavit by the applicant or qualified installer that the project is installed and operating in conformance with any applicable state/local building codes.** Use either the following affidavit form or provide a separate document.
- **The Commission requires a notarized affidavit as part of the application.**

AFFIDAVIT

The Undersigned applicant declares under penalty of perjury that the project is installed and operating in conformance with all applicable building codes.

Applicant's Signature Alane Lakritz Date 3/18/14

Applicant's Printed Name Alane Lakritz

Subscribed and sworn before me this 18 Day of MARCH (month) in the year 2014

County of MORRIS State of NJ

[Signature]
Notary Public/Justice of the Peace

My Commission Expires _____

- Complete the following checklist. If you have questions, contact barbara.bernstein@puc.nh.gov.

CHECK LIST: The following has been included to complete the application:	YES
• All contact information has been provided.	<input checked="" type="checkbox"/>
• A copy of the interconnection agreement. PSNH Customers should include both <i>the Interconnection Standards for Inverters Sized up to 100 KVA</i> and <i>Exhibit B – Certification of Completion for Simplified Process Interconnection</i> .	<input type="checkbox"/>
• Documentation of the distribution utility's approval of the installation.*	<input type="checkbox"/>
• If the facility is participating in another state's renewable portfolio standard (RPS) program, documentation of certification in other state's RPS.	<input type="checkbox"/>
• A signed and notarized attestation.	<input type="checkbox"/>
• A GIS number obtained from the GIS Administrator.	<input type="checkbox"/>
• The document has been printed and notarized.	<input type="checkbox"/>
• The original and 2 copies are included in the packet mailed to Debra Howland, Executive Director of the PUC.	<input type="checkbox"/>
• An electronic version of the completed application has been sent to executive.director@puc.nh.gov .	<input type="checkbox"/>
*Usually included in the interconnection agreement.	

- If the application has been prepared by someone other than the applicant, complete the following. If the application was prepared by the applicant, check here ☐ and skip this section.

PREPARER'S INFORMATION

Preparer's Name Amy Molinaro Email address: amy@knollwoodenergy.com

Address PO Box 30 City Chester State NJ Zip 07930

Telephone 862-432-5908 Cell

Preparer's Signature: *Amy Molinaro*

MONDAY - 1:00 @ 10/21

Public Service Company Of New Hampshire
Interconnection Standards For Inverters Sized Up To 100 kVA
Exhibit B - Certificate of Completion for Simplified Process Interconnections

Installation Information:

☐ Check if owner-installed

Customer or Company Name (print): Warren Goldblatt

Contact Person, if Company: _____

Mailing Address: 9 Hartswood Road

City: Dover

State: NH

Zip Code: 03820

Telephone (Daytime): 603 743 3468

(Evening): _____

Facsimile Number: _____

E-Mail Address: _____

Facility Information:

Address of Facility (if different from above): _____

City: _____

State: _____

Zip Code: _____

Electrical Contractor Contact Information:

Electrical Contractor's Name (if appropriate): ReVision Energy- William Levay

Mailing Address: 7 Commercial Drive

City: Brentwood

State: NH

Zip Code: 03833

Telephone (Daytime): 603 501 1822

(Evening): _____

Facsimile Number: _____

E-Mail Address: kimry@revisionenergy.com

License number: 13139M

Date of approval to install Facility granted by the Company: 7/30/2013

PSNH Application ID number: #N 2755 and 2755A

Inspection:

The system has been installed and inspected in compliance with the local Building/Electrical Code of: per 10/3/13

City: Dover

County: Stafford County

Signed (Local Electrical Wiring Inspector, or attach signed electrical inspection):

Signature: [Signature]

Name (printed): James H. Winkfield

Date: 10/3/13

Customer Certification:

I hereby certify that, to the best of my knowledge, all information contained in this Exhibit B - Certification of Completion is true and correct. This system has been installed and shall be operated in compliance with applicable standards. Also, the initial start-up test required by Puc. 905.04 has been successfully completed.

Customer Signature: [Signature]

As a condition of interconnection you are required to send/fax a copy of this form to :

Public Service Company of New Hampshire
Supplemental Energy Sources Department
780 North Commercial Street
P. O. Box 330, Manchester, NH 03105-0330
Fax No.: (603) 634-2449

PUBLIC SERVICE COMPANY OF NEW HAMPSHIRE
INTERCONNECTION STANDARDS FOR INVERTERS
SIZED UP TO 100 KVA

Simplified Process Interconnection Application and Service Agreement

Date Prepared: 7/17/2013

N2755
RECEIVED
JUL 29 2013
SESD

Contact Information:

Legal Name and Address of Interconnecting Customer (or, Company name, if appropriate)

Customer or Company Name (print): Warren Goldblatt

Contact Person, if Company:

Mailing Address: 9 Hartswood Road

City: Dover

State: NH

Zip Code: 03820

Telephone (Daytime): 603 743 3468

(Evening):

Facsimile Number:

E-Mail Address:

Alternative Contact Information (e.g., System installation contractor or coordinating company, if appropriate):

Name: ReVision Energy c/o Kimry Corrette

Mailing Address: 7 Commercial Drive

City: Brentwood

State: NH

Zip Code: 03833

Telephone (Daytime): 603 501 1822

(Evening):

Facsimile Number:

E-Mail Address: kimry@revisionenergy.com

Electrical Contractor Contact Information (if appropriate):

Name:

Mailing Address:

City:

State:

Zip Code:

Telephone (Daytime):

(Evening):

Facsimile Number:

E-Mail Address:

Facility Site Information:

Facility (Site) Address: 9 Hartswood Road

City: Dover

State: NH

Zip Code: 03820

Electric

Service Company: PSNH

Account Number: 56057801011

Meter Number:

521394087

Non-Default Service Customers Only:

Competitive Electric

Energy Supply Company:

Account Number:

(Customer's with a Competitive Energy Supply Company should verify the Terms & Conditions of their contract with their Energy Supply Company.)

Facility Machine Information:

Generator/

Model Name &

Inverter Manufacturer: SMA

Number: Sunny Boy 7000 US-TL

Quantity: 1

Nameplate Rating: 7 (kW) (kVA) (AC Volts) 240 Phase: Single ☒ Three ☐

System Design Capacity: (kW) (kVA) Battery Backup: Yes ☐ No ☒

Net Metering: If Renewably Fueled, will the account be Net Metered? Yes ☒ No ☐

Prime Mover: Photovoltaic ☒ Reciprocating Engine ☐ Fuel Cell ☐ Turbine ☐ Other ☐

Energy Source: Solar ☒ Wind ☐ Hydro ☐ Diesel ☐ Natural Gas ☐ Fuel Oil ☐ Other ☐

PUBLIC SERVICE COMPANY OF NEW HAMPSHIRE
INTERCONNECTION STANDARDS FOR INVERTERS
SIZED UP TO 100 KVA

Simplified Process Interconnection Application and Service Agreement

Inverter-based Generating Facilities:

✓ UL 1741 / IEEE 1547.1 Compliant (Refer To Part Puc 906 Compliance Path For Inverter Units, Part Puc 906.01 Inverter Requirements)
Yes ☒ No ☐

The standard UL 1741.1 dated May, 2007 or later, "Inverters, Converters, and Controllers for Use in Independent Power Systems," addresses the electrical interconnection design of various forms of generating equipment. Many manufacturers choose to submit their equipment to a Nationally Recognized Testing Laboratory (NRTL) that verifies compliance with UL 1741.1. This term "Listed" is then marked on the equipment and supporting documentation. *Please include, any documentation provided by the inverter manufacturer describing the inverter's UL 1741/IEEE 1547.1 listing.*

External Manual Disconnect Switch:

An External Manual Disconnect Switch shall be installed in accordance with 'Part Puc 905 Technical Requirements For Interconnections For Facilities, Puc 905.01 Requirements For Disconnect Switches and 905.02 Disconnect Switch.'

✓ Yes ☒ No ☐

Location of External Manual Disconnect Switch: Within line of sight of the Utility meter

Project Estimated Install Date: 9/2013

Project Estimated In-Service Date: 11/2013

CONFIRMED W/ REVISION DX WILL BE LOCATED
ADJACENT TO PSNH MTR.

Interconnecting Customer Signature:

I hereby certify that, to the best of my knowledge, all of the information provided in this application is true and I agree to the Terms and Conditions for Simplified Process Interconnections attached hereto:

Customer Signature: Walter J. Mello

Title: _____

Date: 7/20/13

Please include, a one-line and/or three-line drawing of proposed installation

For PSNH Use Only

Approval to Install Facility:

Installation of the Facility is approved contingent upon the Terms and Conditions For Simplified Process Interconnections of this Agreement, and agreement to any system modifications, if required.

Are system modifications required? Yes ☐ No ☒ To be Determined ☐

Company Signature: Michael Mello

Title: Sr. Engineer

Date: 7-29-13

PSNH Application Project ID#: _____

PUBLIC SERVICE COMPANY OF NEW HAMPSHIRE
INTERCONNECTION STANDARDS FOR INVERTERS
SIZED UP TO 100 KVA
Terms and Conditions for Simplified Process Interconnections

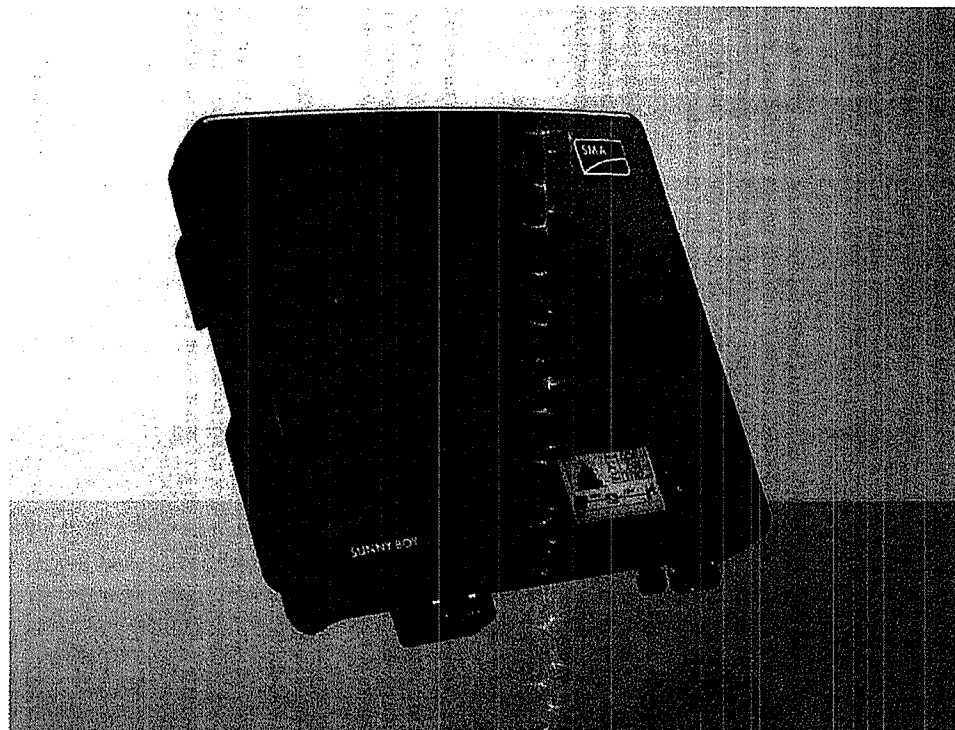
Company waives inspection/Witness Test: Yes ☐ No ☒

Date of inspection/Witness Test: PLEASE CALL TO SCHEDULE

1. **Construction of the Facility.** The Interconnecting Customer may proceed to construct the Facility in compliance with the specifications of its Application once the Approval to Install the Facility has been signed by the Company.
2. **Interconnection and operation.** The Interconnecting Customer may operate Facility and interconnect with the Company's system once the all of the following has occurred:
 - 2.1. **Municipal Inspection.** Upon completing construction, the Interconnecting Customer will cause the Facility to be inspected or otherwise certified by the local electrical wiring inspector with jurisdiction.
 - 2.2. **Certificate of Completion.** The Interconnecting Customer returns the Certificate of Completion to the Agreement to the Company at address noted.
 - 2.3. **Company has completed or waived the right to inspection.**
3. **Company Right of Inspection.** The Company will make every attempt within ten (10) business days after receipt of the Certificate of Completion, and upon reasonable notice and at a mutually convenient time, conduct an inspection of the Facility to ensure that all equipment has been appropriately installed and that all electrical connections have been made in accordance with the Interconnection Standard. The Company has the right to disconnect the Facility in the event of improper installation or failure to return Certificate of Completion. All projects larger than 10 kVA will be witness tested, unless waived by the Company.
4. **Safe Operations and Maintenance.** The Interconnecting Customer shall be fully responsible to operate, maintain, and repair the Facility.
5. **Disconnection.** The Company may temporarily disconnect the Facility to facilitate planned or emergency Company work.
6. **Metering and Billing.** All renewable Facilities approved under this Agreement that qualify for net metering, as approved by the Commission from time to time, and the following is necessary to implement the net metering provisions:
 - 6.1. **Interconnecting Customer Provides:** The Interconnecting Customer shall furnish and install, if not already in place, the necessary meter socket and wiring in accordance with accepted electrical standards. In some cases the Interconnecting Customer may be required to install a separate telephone line.
 - 6.2. **Company Installs Meter.** The Company will make every attempt to furnish and install a meter capable of net metering within ten (10) business days after receipt of the Certificate of Completion if inspection is waived, or within 10 business days after the inspection is completed, if such meter is not already in place.
7. **Indemnification.** Interconnecting Customer and Company shall each indemnify, defend and hold the other, its directors, officers, employees and agents (including, but not limited to, Affiliates and contractors and their employees), harmless from and against all liabilities, damages, losses, penalties, claims, demands, suits and proceedings of any nature whatsoever for personal injury (including death) or property damages to unaffiliated third parties that arise out of, or are in any manner connected with, the performance of this Agreement by that party, except to the extent that such injury or damages to unaffiliated third parties may be attributable to the negligence or willful misconduct of the party seeking indemnification.
8. **Limitation of Liability.** Each party's liability to the other party for any loss, cost, claim, injury, liability, or expense, including reasonable attorney's fees, relating to or arising from any act or omission in its performance of this Agreement, shall be limited to the amount of direct damage actually incurred. In no event shall either party be liable to the other party for any indirect, incidental, special, consequential, or punitive damages of any kind whatsoever.
9. **Termination.** This Agreement may be terminated under the following conditions:
 - 9.1. **By Mutual Agreement.** The Parties agree in writing to terminate the Agreement.
 - 9.2. **By Interconnecting Customer.** The Interconnecting Customer may terminate this Agreement by providing written notice to Company.
 - 9.3. **By Company.** The Company may terminate this Agreement (1) if the Facility fails to operate for any consecutive 12 month period, or (2) in the event that the Facility impairs or, in the good faith judgment of the Company, may imminently impair the operation of the electric distribution system or service to other customers or materially impairs the local circuit and the Interconnecting Customer does not cure the impairment.
10. **Assignment/Transfer of Ownership of the Facility.** This Agreement shall survive the transfer of ownership of the Facility to a new owner when the new owner agrees in writing to comply with the terms of this Agreement and so notifies the Company.
11. **Interconnection Standard.** These Terms and Conditions are pursuant to the Company's "Interconnection Standards for Inverters Sized Up to 100 kVA" for the Interconnection of Customer-Owned Generating Facilities, as approved by the Commission and as the same may be amended from time to time ("Interconnection Standard"). All defined terms set forth in these Terms and Conditions are as defined in the Interconnection Standard (see Company's website for the complete document).



SUNNY BOY 3000TL / 4000TL / 5000TL



High Yields

- Maximum efficiency of 97 %
- Multi-String technology*
- Transformerless, with H5 topology
- Shade management with OptiTrac Global Peak

Safe

- Integrated ESS DC switch-disconnector

Simple

- Easily accessible connection area
- Cable connection without tools
- DC plug system SUNCUX

Communicative

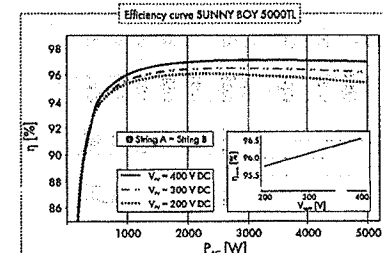
- Bluetooth® technology as standard
- Multilingual graphic display
- Multifunction relay as standard

SUNNY BOY 3000TL / 4000TL / 5000TL

Perfection Plus. Usability. The transformerless Sunny Boy generation

More communicative, easier to use and more efficient than ever: this Sunny Boy is setting new standards in inverter technology. A modern graphic display, readout of daily values even after sunset, simplified installation concept and wireless communication via Bluetooth®. The new Sunny Boys fulfill every wish. With the new OptiTrac Global Peak shade management and an optimal efficiency of 97 %, the inverters ensure optimum solar yield. As transformerless, multi-string devices, the Sunny Boy 4000TL and 5000TL provide maximum flexibility for plant design, and are the first choice for demanding generator designs.

Technical data	Sunny Boy 3000TL	Sunny Boy 4000TL	Sunny Boy 4000TL/V	Sunny Boy 5000TL
Input [DC]				
Max. DC power (0 cos φ = 1)	3200 W	4200 W	4200 W	5300 W
Max. DC voltage	550 V	550 V	550 V	550 V
MPP voltage range	188 V - 440 V	175 V - 440 V	175 V - 440 V	175 V - 440 V
DC nominal voltage	400 V	400 V	400 V	400 V
Min. DC voltage / start voltage	125 V / 150 V	125 V / 150 V	125 V / 150 V	125 V / 150 V
Max. input current / per string	17 A / 17 A	2 x 15 A / 15 A	2 x 15 A / 15 A	2 x 15 A / 15 A
Number of MPP trackers / strings per MPP tracker	1 / 2	2 / A: 2, B: 2	2 / A: 2, B: 2	2 / A: 2, B: 2
Output [AC]				
AC nominal power (0 230 V, 50 Hz)	3000 W	4000 W	3680 W	4600 W
Max. AC apparent power	3000 VA	4000 VA	4000 VA	5000 VA
Nominal AC voltage; range	220, 230, 240 V; 180 - 280 V	220, 230, 240 V; 180 - 280 V	220, 230, 240 V; 180 - 280 V	220, 230, 240 V; 180 - 280 V
AC grid frequency; range	50, 60 Hz; ± 5 Hz	50, 60 Hz; ± 5 Hz	50, 60 Hz; ± 5 Hz	50, 60 Hz; ± 5 Hz
Max. output current	16 A	22 A	22 A	22 A
Power factor (cos φ)	1	1	1	1
Phase conductors / connection phases	1 / 1	1 / 1	1 / 1	1 / 1
Efficiency	97.0 % / 96.3 %	97.0 % / 96.4 %	97.0 % / 96.4 %	97.0 % / 96.5 %
Protection devices				
DC reverse-polarity protection	•	•	•	•
ESS switch-disconnector	•	•	•	•
AC short circuit protection	•	•	•	•
Ground fault monitoring	•	•	•	•
Grid monitoring (SMA Grid Guard)	•	•	•	•
Galvanically isolated / all-pole sensitive fault current monitoring unit	-/•	-/•	-/•	-/•
Protection class / overvoltage category	I / III	I / III	I / III	I / III
General data				
Dimensions (W / H / D) in mm	470 / 445 / 180	470 / 445 / 180	470 / 445 / 180	470 / 445 / 180
Weight	22 kg	25 kg	25 kg	25 kg
Operating temperature range	-25 °C ... +60 °C	-25 °C ... +60 °C	-25 °C ... +60 °C	-25 °C ... +60 °C
Noise emission (typical)	≤ 25 dB(A)	≤ 29 dB(A)	≤ 29 dB(A)	≤ 29 dB(A)
Internal consumption (night)	< 0.5 W	< 0.5 W	< 0.5 W	< 0.5 W
Topology	transformerless	transformerless	transformerless	transformerless
Cooling concept	OptiCool	OptiCool	OptiCool	OptiCool
Electronics protection rating / connection area (as per IEC 60529)	IP65 / IP54	IP65 / IP54	IP65 / IP54	IP65 / IP54
Climatic category (per IEC 60721-3-4)	4K4H	4K4H	4K4H	4K4H
Features				
DC connection: SUNCUX	•	•	•	•
AC connection: screw terminal / plug connector / spring-type terminal	-/-/•	-/-/•	-/-/•	-/-/•
Display: text line / graphic	-/•	-/•	-/•	-/•
Interfaces: RS485 / Bluetooth®	•/•	•/•	•/•	•/•
Warranty: 5 / 10 / 15 / 20 / 25 years	•/•/•/•/•	•/•/•/•/•	•/•/•/•/•	•/•/•/•/•
Certificates and permits (more available on request)	CE, VDE 0126-1-1, DK 5940, RD 1663, G83/1-1, PPC, AS4777, EN 50438*, C10/C11, PPDS			
* Does not apply to all national deviations of EN 50438				
• Standard features • Optional features — not available				
Data of nominal conditions	SB 3000TL-20	SB 4000TL-20	SB 4000TL-20/V 0159	SB 5000TL-20
Type designation				



Accessories



N2755A

Phase 2

PUBLIC SERVICE COMPANY OF NEW HAMPSHIRE
INTERCONNECTION STANDARDS FOR INVERTERS
SIZED UP TO 100 KVA

Simplified Process Interconnection Application and Service Agreement

RECEIVED

JUL 29 2013

SESD

Date Prepared: 7/17/2013

Contact Information:

Legal Name and Address of Interconnecting Customer (or, Company name, if appropriate)

Customer or Company Name (print): Warren Goldblatt

Contact Person, if Company:

Mailing Address: 9 Hartswood Road

City: Dover

State: NH

Zip Code: 03820

Telephone (Daytime): 603 743 3468

(Evening):

Facsimile Number:

E-Mail Address:

Alternative Contact Information (e.g., System installation contractor or coordinating company, if appropriate):

Name: ReVision Energy c/o Kimry Corrette

Mailing Address: 7 Commercial Drive

City: Brentwood

State: NH

Zip Code: 03833

Telephone (Daytime): 603 501 1822

(Evening):

Facsimile Number:

E-Mail Address: kimry@revisionenergy.com

Electrical Contractor Contact Information (if appropriate):

Name:

Mailing Address:

City:

State:

Zip Code:

Telephone (Daytime):

(Evening):

Facsimile Number:

E-Mail Address:

Facility Site Information:

Facility (Site) Address: 9 Hartswood Road

City: Dover

State: NH

Zip Code: 03820

Electric

Service Company: PSNH

Account Number: 56057801011

Meter Number:

S21394087

Non-Default Service Customers Only:

Competitive Electric

Energy Supply Company:

Account Number:

(Customer's with a Competitive Energy Supply Company should verify the Terms & Conditions of their contract with their Energy Supply Company.)

Facility Machine Information:

Generator/

Model Name &

Inverter Manufacturer: SMA

Number: Sunny Boy 3000 US-TL

Quantity:

2

Nameplate Rating: 6

(kW)

(kVA)

(AC Volts) 240

Phase: Single

Three

System Design Capacity:

(kW)

(kVA)

Battery Backup: Yes

No

Net Metering: If Renewably Fueled, will the account be Net Metered? Yes

No

Prime Mover: Photovoltaic

Reciprocating Engine

Fuel Cell

Turbine

Other

Energy Source: Solar

Wind

Hydro

Diesel

Natural Gas

Fuel Oil

Other

PUBLIC SERVICE COMPANY OF NEW HAMPSHIRE
INTERCONNECTION STANDARDS FOR INVERTERS
SIZED UP TO 100 KVA

Simplified Process Interconnection Application and Service Agreement

Inverter-based Generating Facilities:

✓ UL 1741 / IEEE 1547.1 Compliant (Refer To Part Puc 906 Compliance Path For Inverter Units, Part Puc 906.01 Inverter Requirements)
Yes ☒ No ☐

The standard UL 1741.1 dated May, 2007 or later, "Inverters, Converters, and Controllers for Use in Independent Power Systems," addresses the electrical interconnection design of various forms of generating equipment. Many manufacturers choose to submit their equipment to a Nationally Recognized Testing Laboratory (NRTL) that verifies compliance with UL 1741.1. This term "Listed" is then marked on the equipment and supporting documentation. *Please include, any documentation provided by the inverter manufacturer describing the inverter's UL 1741/IEEE 1547.1 listing.*

External Manual Disconnect Switch:

An External Manual Disconnect Switch shall be installed in accordance with 'Part Puc 905 Technical Requirements For Interconnections For Facilities, Puc 905.01 Requirements For Disconnect Switches and 905.02 Disconnect Switch.'

✓ Yes ☒ No ☐

Location of External Manual Disconnect Switch: Within line of sight of the Utility meter

Project Estimated Install Date: 9/2013

Project Estimated In-Service Date: 11/2013

Interconnecting Customer Signature:

I hereby certify that, to the best of my knowledge, all of the information provided in this application is true and I agree to the **Terms and Conditions for Simplified Process Interconnections** attached hereto:

Customer Signature: Walter J. Duff

Title: _____

Date: 7/20/13

Please include, a one-line and/or three-line drawing of proposed installation

For PSNH Use Only

Approval to Install Facility:

Installation of the Facility is approved contingent upon the Terms and Conditions For Simplified Process Interconnections of this Agreement, and agreement to any system modifications, if required.

Are system modifications required? Yes ☐ No ☒ To be Determined ☐

Company Signature: Michael Moffa

Title: Sr. Engineer

Date: 7-29-13

PSNH Application Project ID#: _____

PUBLIC SERVICE COMPANY OF NEW HAMPSHIRE
INTERCONNECTION STANDARDS FOR INVERTERS
SIZED UP TO 100 KVA

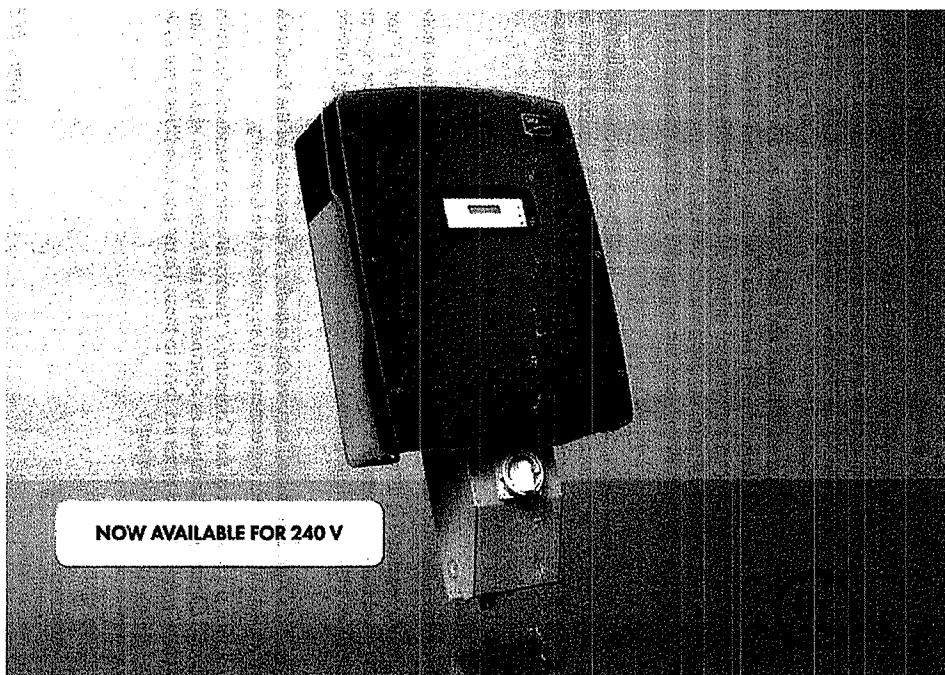
Terms and Conditions for Simplified Process Interconnections

Company waives inspection/Witness Test: Yes ☐ No ☒

Date of inspection/Witness Test: PLEASE CALL TO SCHEDULE

1. **Construction of the Facility.** The Interconnecting Customer may proceed to construct the Facility in compliance with the specifications of its Application once the Approval to Install the Facility has been signed by the Company.
2. **Interconnection and operation.** The Interconnecting Customer may operate Facility and interconnect with the Company's system once the all of the following has occurred:
 - 2.1. **Municipal Inspection.** Upon completing construction, the Interconnecting Customer will cause the Facility to be inspected or otherwise certified by the local electrical wiring inspector with jurisdiction.
 - 2.2. **Certificate of Completion.** The Interconnecting Customer returns the Certificate of Completion to the Agreement to the Company at address noted.
 - 2.3. **Company has completed or waived the right to inspection.**
3. **Company Right of Inspection.** The Company will make every attempt within ten (10) business days after receipt of the Certificate of Completion, and upon reasonable notice and at a mutually convenient time, conduct an inspection of the Facility to ensure that all equipment has been appropriately installed and that all electrical connections have been made in accordance with the Interconnection Standard. The Company has the right to disconnect the Facility in the event of improper installation or failure to return Certificate of Completion. All projects larger than 10 kVA will be witness tested, unless waived by the Company.
4. **Safe Operations and Maintenance.** The Interconnecting Customer shall be fully responsible to operate, maintain, and repair the Facility.
5. **Disconnection.** The Company may temporarily disconnect the Facility to facilitate planned or emergency Company work.
6. **Metering and Billing.** All renewable Facilities approved under this Agreement that qualify for net metering, as approved by the Commission from time to time, and the following is necessary to implement the net metering provisions:
 - 6.1. **Interconnecting Customer Provides:** The Interconnecting Customer shall furnish and install, if not already in place, the necessary meter socket and wiring in accordance with accepted electrical standards. In some cases the Interconnecting Customer may be required to install a separate telephone line.
 - 6.2. **Company Installs Meter.** The Company will make every attempt to furnish and install a meter capable of net metering within ten (10) business days after receipt of the Certificate of Completion if inspection is waived, or within 10 business days after the inspection is completed, if such meter is not already in place.
7. **Indemnification.** Interconnecting Customer and Company shall each indemnify, defend and hold the other, its directors, officers, employees and agents (including, but not limited to, Affiliates and contractors and their employees), harmless from and against all liabilities, damages, losses, penalties, claims, demands, suits and proceedings of any nature whatsoever for personal injury (including death) or property damages to unaffiliated third parties that arise out of, or are in any manner connected with, the performance of this Agreement by that party, except to the extent that such injury or damages to unaffiliated third parties may be attributable to the negligence or willful misconduct of the party seeking indemnification.
8. **Limitation of Liability.** Each party's liability to the other party for any loss, cost, claim, injury, liability, or expense, including reasonable attorney's fees, relating to or arising from any act or omission in its performance of this Agreement, shall be limited to the amount of direct damage actually incurred. In no event shall either party be liable to the other party for any indirect, incidental, special, consequential, or punitive damages of any kind whatsoever.
9. **Termination.** This Agreement may be terminated under the following conditions:
 - 9.1. **By Mutual Agreement.** The Parties agree in writing to terminate the Agreement.
 - 9.2. **By Interconnecting Customer.** The Interconnecting Customer may terminate this Agreement by providing written notice to Company.
 - 9.3. **By Company.** The Company may terminate this Agreement (1) if the Facility fails to operate for any consecutive 12 month period, or (2) in the event that the Facility impairs or, in the good faith judgment of the Company, may imminently impair the operation of the electric distribution system or service to other customers or materially impairs the local circuit and the Interconnecting Customer does not cure the impairment.
10. **Assignment/Transfer of Ownership of the Facility.** This Agreement shall survive the transfer of ownership of the Facility to a new owner when the new owner agrees in writing to comply with the terms of this Agreement and so notifies the Company.
11. **Interconnection Standard.** These Terms and Conditions are pursuant to the Company's "Interconnection Standards for Inverters Sized Up to 100 kVA" for the Interconnection of Customer-Owned Generating Facilities, as approved by the Commission and as the same may be amended from time to time ("Interconnection Standard"). All defined terms set forth in these Terms and Conditions are as defined in the Interconnection Standard (see Company's website for the complete document).

SUNNY BOY 6000TL-US / 7000TL-US / 8000TL-US / 9000TL-US / 10000TL-US / 11000TL-US



NOW AVAILABLE FOR 240 V

Innovative

- First transformerless SMA inverter to be certified in accordance with UL 1741
- First inverter with arc-fault circuit interrupter listed according to UL 1699B

Economical

- Maximum efficiency of 98.7%
- Class-leading CEC efficiency of 98.5%
- Superior MPP tracking with OptiTrack™
- Transformerless, with H5 topology

Reliable

- OptiCool™ active temperature management

Convenient

- Integrated DC disconnect
- SMA Power Balance for three-phase grid connection

Technical data

Input (DC)

Max. recommended PV power (0 module STC)
Max. DC power (0 cos φ = 1)
Max. input voltage
MPP voltage range / rated input voltage
Min. input voltage / initial input voltage
Max. input current
Max. input current per string
Number of independent MPP inputs
Strings per MPP input @ Combiner Box Output (AC)

Rated power / max. apparent AC power
Nominal AC voltage / nominal AC voltage range
AC power frequency / range
Max. output current
Power factor at rated power
Feed-in phases / connection phases

Efficiency
CEC efficiency / max. efficiency
Protective devices
DC reverse polarity protection
AC short-circuit current capability
Galvanic isolation
All-pole-sensitive residual-current monitoring unit
Arc-fault circuit interrupter (according to UL 1699B)
Protection class
Overvoltage category

General data

Dimensions (W / H / D)
Dimensions of DC Disconnect (W / H / D)
Weight
Weight of DC Disconnect
Operating temperature range
Noise emission (typical)
Self-consumption (night)
Topology
Cooling concept
Degree of protection
Degree of protection of connection area
Max. permissible value for relative humidity (non-condensing)

Features

DC connection
AC connection
Display
Interface: RS485 / Bluetooth
Warranty: 10 / 15 / 20 years
Certificates and approvals (more available on request)

Sunny Boy 6000TL-US 208 V	Sunny Boy 6000TL-US 240 V	Sunny Boy 7000TL-US 208 V	Sunny Boy 7000TL-US 240 V
7500 W 6300 W 600 V 300 V - 480 V / 345 V 300 V / 360 V 20.9 A 20.9 A 1 6	7500 W 6200 W 600 V 345 V - 480 V / 379 V 345 V / 360 V 18.1 A 18.1 A 1 6	8750 W 7300 W 600 V 300 V - 480 V / 345 V 300 V / 360 V 24.4 A 24.4 A 1 6	8750 W 7300 W 600 V 345 V - 480 V / 379 V 345 V / 360 V 21.1 A 21.1 A 1 6
6000 W / 6000 VA 208 V / 183 V - 229 V 60 Hz / 59.3 Hz ... 60.5 Hz 28.8 A 1 1 / 2 98 % / 98.6 %	6000 W / 6000 VA 240 V / 211 V - 264 V 60 Hz / 59.3 Hz ... 60.5 Hz 25 A 1 1 / 2 98.5 % / 98.7 %	7000 W / 7000 VA 208 V / 183 V - 229 V 60 Hz / 59.3 Hz ... 60.5 Hz 33.7 A 1 1 / 2 98 % / 98.6 %	7000 W / 7000 VA 240 V / 211 V - 264 V 60 Hz / 59.3 Hz ... 60.5 Hz 29.2 A 1 1 / 2 98.5 % / 98.7 %
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III	III	III	III
470 / 615 / 240 mm (18.4 / 24.1 / 9.5 inch) 187 / 297 / 190 mm (7.28 / 11.7 / 7.5 inch) 35 kg / 78 lb 3.5 kg / 8 lb -40 °C ... +60 °C / -40 °F ... +140 °F 46 dB(A) 0.15 W Transformerless H5 OptiCool NEMA 3R NEMA 3R 100 %	470 / 615 / 240 mm (18.4 / 24.1 / 9.5 inch) 187 / 297 / 190 mm (7.28 / 11.7 / 7.5 inch) 35 kg / 78 lb 3.5 kg / 8 lb -40 °C ... +60 °C / -40 °F ... +140 °F 46 dB(A) 0.15 W Transformerless H5 OptiCool NEMA 3R NEMA 3R 100 %	470 / 615 / 240 mm (18.4 / 24.1 / 9.5 inch) 187 / 297 / 190 mm (7.28 / 11.7 / 7.5 inch) 35 kg / 78 lb 3.5 kg / 8 lb -40 °C ... +60 °C / -40 °F ... +140 °F 46 dB(A) 0.15 W Transformerless H5 OptiCool NEMA 3R NEMA 3R 100 %	470 / 615 / 240 mm (18.4 / 24.1 / 9.5 inch) 187 / 297 / 190 mm (7.28 / 11.7 / 7.5 inch) 35 kg / 78 lb 3.5 kg / 8 lb -40 °C ... +60 °C / -40 °F ... +140 °F 46 dB(A) 0.15 W Transformerless H5 OptiCool NEMA 3R NEMA 3R 100 %
Screw terminal Screw terminal Text line o / o • / o / o	Screw terminal Screw terminal Text line o / o • / o / o	Screw terminal Screw terminal Text line o / o • / o / o	Screw terminal Screw terminal Text line o / o • / o / o
UL1741, UL1998, IEEE1547, FCC Part 15 (Class A & B), CAN/CSA C22.2 107.1-1, UL 1699B			

SUNNY BOY 6000TL-US / 7000TL-US / 8000TL-US / 9000TL-US / 10000TL-US / 11000TL-US

Transformerless design, maximum energy production

The Sunny Boy TL-US series is UL listed for North America and features SMA's innovative H5 topology, resulting in superior efficiencies of more than 98 percent and unmatched solar power production. The transformerless design reduces weight, increases the speed of payback and provides optimum value for any residential or decentralized commercial PV system. The Sunny Boy TL-US series for North America is the ideal choice in transformerless technology.

Type designation

SB 6000TLUS-12

SB 7000TLUS-12